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## LAWS OF SPEECH-RHYTHM

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## GLASGOW

JAMES MACLEHOSE AND SONS

## PREFACE.

These twenty-four Laws were investigated and formulated about four years ago. They form one chapter of an intended volume, the publication of which, I am sorry to say, may continue to be prevented by circumstances beyond my control. I regret, especially, that the printing of the two chapters next in order, which elucidate and exemplify the "Laws," must stand over. Meanwhile I have thought it worth while to put within reach of the small band of persons interested what is perhaps the concentrated, if somewhat dry, essence of what I have to say on the "Rhythm of Speech," trusting it will suggest observational and experimental lines of inquiry hitherto neglected, lead to the correction of errors a single individual cannot hope to avoid, and promote a knowledge of the subject in ways not yet open to vision. It will be noticed by those who did me the favour of reading with any care the second edition of my pamphlet "The Basis of English Rhythm (1906)" that a considerable advance has been made. And, indeed, in this field, as in so many others, it would seem that, the farther one goes, the more numerous and attractive are the vistas opened up. There await solution problems that require greater native adaptation and more ability than I can claim. These qualifications, I cannot doubt, will be forthcoming when the settlement of momentous issues enables the nations to resume, with an added seriousness, the pursuits and conquests of peace.

In the meantime my twenty-four Laws are meant to fill a gap that undoubtedly exsits. They contain more than may appear on the surface. If they should turn out to be a foundation in the main well and truly laid, my utmost ambition will have been realised.
W. T.

Glasgow, 15 th June, 1916.

## LAWS OF SPEECH-RHYTHM.

## PRELIMINARY DEFINITION.

The rhythm of any portion of speech is that property of it in virtue of which its movement is apprehended, and can be reproduced, as a unity.
I. The fundamental law of speech-rhythm.

Speech-rhythm presupposes, on the part of a normal human being, the power to produce with his vocal organs blows which are sensibly equidistant in time.

But not all consecutive blows need be separated by one and the sane magnitude of interval ; intervals, as regards magnitude, may belong to several sets. The rhythm of mere equality is a fiction.
II. The law of syllables and their vowel-blows.

In every conventional syllable there is a vowel or a semi-vowel at or close to the beginning of which a vocal blow is delivered and perceived, the real syllable being bounded by two such blows.

Vocal blows are accent or ictus in the wider sense. The interval between two consecutive blows in a connected series of syllables is the duration of the syllable starting with the first blow, and, for shortness' sake, might be called the distance or interval between the two syllables in question. Conventional syllables are in no rhythmical sense measurable.
III. The law of force-variation.

In all languages some vowel-blows-accents in the ordinary sense-are stronger than others, and vary in strength among themselves.

In a rhythmical phrase these may be called rhythmical accents, because they produce the sensation of those rhythmical groups sometimes called bars or, with less ambiguity, measures.

## IV. The law of accent in group-measurement.

Group-measurement, conscious or unconscious, is normally effected from accent to accent.

Thus it is impossible to perceive or verify the measurement of a group unless at least the first syllable of the next group is spoken and heard. And as all measurements are relative there must be at least one other complete measure before any measurement is possible at all. "Pitch-accent" is a modern bookish fiction.

## V. The law of vowel-blow in syllable-measurement.

Syllable-measurement, conscious or unconscious, is normally effected from vowel-blow to vowel-blow.

Thus in a rhythmical series of syllables the final one is not measurable. With only two syllables, neither is measurable ; and three are necessary in order to measure the first two. We must not be deceived by mere language; as were the ancients, and as are the moderns ; it is time, not syllables, that is measurable. And a rhythmical syllable must not be confused with a conventional syllable.

## VI. The law of measure-duration.

The durations of simple measures in a rhythmical phrase bear to one another the simplest ratios, as that of equality, that of 2 to 3 or its duplicate 4 to 9 , rarely
that of 3 to 4 , which, without special training, is practically and for most people arrhythmical.

Thus the commoner relative measure-durations $2,3,4 \frac{1}{2}$ show a progressive rise of 50 per cent. A rhythmical phrase is determined by a break of some kind, sometimes e.g. by a mere intonation, and constitutes the natural unit presented for rhythmical analysis. "Pitch-rhythm" is another bookish fiction; there is no such thing.

## VII. The law of syllable-duration or "quantity."

Each of the constituent syllables of a simple measure bears to each of the others the ratio of equality or that of 2 to 1 or that of 1 to 2 , unless when the two in question are mensurally out of gear, in which case the same ratios hold, provided that for one or both there is taken a mensurally related syllable or group in an adjoining measure.

The careful verification of this law in every variety of conditions throws much light on the nature of rhythm and on the unconscious mental operations involved. [See Law XIII.] The principle of the "compound" measure admits other ratios. The same is true of the "complex" measure.

One hears of quantitative rhythm as something apart from accent and independent of it. It is important to verify, and easy to prove there is no such thing. So-called proofs to the contrary effect, such as that derived from accentless performance on the organ, are based on fundamental error.
VIII. The law of rests.

Syllables, accented or unaccented, but especially the latter, may without detriment to rhythmical continuity be sparingly replaced by silences called rests having the same quantities.

These rarely, if ever, cover two consecutive measures.

## IX. The law of measure-structure or "Time."

A simple measure is built up on a basis of two equal units of duration, the "Time" being duple, or of three equal units, the "Time" being triple; and a compound measure consists of two or more simple measures unified by an initial accent stronger than those of the other constituent measures.

The earlier unit in duple, the accented one, is called thesis, the later arsis. In triple, on the other hand, thesis is constituted of the first two units, the third being arsis. In measures compounded of two and three simple measures additional thesis and arsis on a higher plane follow the same principle, a whole measure being the unit.

## X. The law of unit-shifting.

As a variation upon the standard duple measure there may be an isochronous triple measure with consequent unit-shifting to the value $\frac{2}{3}$; and as a variation upon the standard triple measure there may be an isochronous duple measure with consequent unit-shifting to the value $1 \frac{1}{2}$.

The successively related units $\frac{2}{3}, 1,1 \frac{1}{2}$, thus show a progressive rise of 50 per cent. The equated measures | 1 I $\left|=\left|\frac{2}{3} \frac{2}{3} \frac{2}{3}\right|\right.$, the latter conveniently describable as in tripletic triple "Time," and the similar set $\left\lvert\, \begin{array}{ll}\text { I } & 1|=| \times \frac{1}{2} \\ \left.\times \frac{1}{2} \right\rvert\,\end{array}\right.$, the latter in dupletic duple, realise in symbols what the Law expresses in words. Optional notations are


Dupletic duple may give rise to a slow triple, dupletic triple, $\left|x \frac{1}{2} \times \frac{1}{2} \times \frac{1}{2}\right|$. A still slower triple-compound, however-was
 Final| 2 I seems to occur nowhere, being instinctively replaced by dupletic $\left|\frac{1}{2} \mathrm{I} \frac{1}{2}\right|$ or $\left\lvert\, \mathrm{I}_{\frac{1}{2}} \mathrm{r} \frac{1}{2}\right.$ ' $\mid$ where $\mathrm{I}_{\frac{1}{2}}{ }^{\prime}$ signifies a clipped duration to suit a short syllable.
XI. The law of complex measures.

Two units of a triple measure, not already too slow, may, as regards subdivision and unit-shifting, be treated just as if it were a complete measure, thus giving rise to a complex or double-unit measure.

For example, $\left|\frac{4}{3} \frac{2}{8} \mathrm{I}\right|$, a common measure in English, is as a whole based on the unit I , thesis still remaining 2 , whilst its earlier two-thirds is treated in itself as triple based on the unit $\frac{2}{3}$. In | "Sound the loud | timbrel ..." the unit of the first measure is unusually long, but "Sound the" is to "loud" in the ratio of 2 to 1 , and "Sound" is to "the" in that same ratio. Notice that but for the near undercurrent of sixths, the transition could probably not be compassed.
XII. The law of quantity-range in related measures.

The range of quantity in related simple measures comprises the shorts $\frac{1}{2}, \frac{2}{3}, \frac{3}{4}$, and 1 , and the longs $1 \frac{1}{3}, 1 \frac{1}{2}, 2,2 \frac{1}{4}$, and 3 ; the shortest being chosen, as regards tempo, to represent a syllable not too short to be produced, and the longest one not too long to be apprehended.

The range of duration, not being relative, is a different thing. It also has limits, but it varies infinitely within these. A given quantity may in duration be only a rough approximation to the quantity represented by the same symbol in another context.

## XIII. The law of quantity-assimilation.

The quantity of a syllable is frequently assimilated to that of a syllable or group of syllables in an adjoining measure, with consequent modification of the remainder of its own measure to preserve its integrity as a whole.

Thus a measure may in its internal structure, and within strict limits, be abnormal, perhaps even arrhythmical, the
quantities of its syllables, though rhythmical in their sum, not being felt as quantitatively related, or in gear. For example, what is $\mid 2$ I $\mid$ in normal $\left|2 \times 1 r_{2}^{\frac{1}{2}} \mathrm{r} \frac{1}{2}\right|$ may become, and, in English, generally does become $\left|2 \frac{1}{4} \frac{3}{4}\right|$ when it occurs in combination with $\left\lvert\, \frac{3}{4} \frac{3}{4}\left\lceil\left.\frac{1}{2} \right\rvert\,\right.$, thus $\left.\left|2 \frac{1}{4} \frac{3}{4}\right| \frac{3}{4} \frac{3}{4} \times \frac{1}{2} \right\rvert\,$. \right. In "The summer-dried fount we knew and shunned," $\frac{3}{4}\left|\frac{3}{4} \frac{3}{4} r \frac{1}{2}\right|_{2} 1|2 r| 2$, short "The" is assimilated to short "sum-" measuring $\frac{3}{4}$, long "dried" is assimilated to half the measure "fount we" and thus measures $\mathrm{r} \frac{1}{2}$, and short "we" is assimilated to half of "knew," that is, to the unit of that measure, which is r .

## XIV. The law of verse-equivalents and measure-substitution.

In verse which admits of the substitution of equivalent groups it is measures based on simply related units,-not feet or phrases however defined,-that are equivalents in the sense that one measure may be substituted for another without affecting the rhythmical structure of the context.

If the substitution of a certain measure alters the context as well, it is plainly not a genuine equivalent for the measure it is intended to replace. [In English and some other languages unequal measures, by this test, are often equivalents.] Prosodists and poets may on paper substitute a trochee $|-\cup|$ for an iambus $v \mid-$, but in no real sense are these feet rhythmical equivalents. For the $\checkmark$ in the iambus there is silence in the trochee, and a soldier marching to the time would set down his foot in either at thesis, which is the long. "The summer-dried fount we knew and shunned" [see under Law XIII.], itself a phrase, might be divided into the smaller phrases, "The summerdried," "fount," "we knew," "and shunned," the first three of which measure $3 \frac{3}{4}, 2,3$, or, after the Greek manner, into the feet "The summer" (iambus with resolved thesis), "-dried fount," "we knew," "and shunned " measuring, the first three
of them, $2 \frac{1}{4}, 3 \frac{1}{2}, 3$, or, after Prof. Saintsbury's manner, into the feet "The sum," "mer-dried fount" ("anapaest"), etc., the first three of which measure $1 \frac{1}{2}, 4 \frac{1}{4}, 3$. Plainly these figures show the corresponding divisions to be wholly alien to rhythm, the outstanding rhythmical fact about the phrase under examination being the palpable equidistance, measuring in every case 3 , of the four accented syllables. And, similarly, in general, it is easy to show that phrasing and scanning, however defined or conducted, lie wholly outside the realm of measurement or rhythm. They are not necessarily useless on that account.
XV. The law of deducible rhythm in so-called quantitative verse.

If, in a normal line of quantitative verse consisting of long and short syllables, traditionally so called whether or not they measure respectively 2 and 1 , it is the case that if a long alternates with either one short or with two, it may with certainty be inferred that the long bears the rhythmical accent or verse-ictus, and that the two durations are under constraint to settle down into the definite quantities 2 and 1 ; and it is frequently possible to deduce, from certain other arrangements of longs and shorts, especially if an eye is had to the context, the probable positions of the accent or verseictus and the probable quantities,-that is, the probable rhythm.

As an instance of the latter case may be taken that in which the shorts are alternately one and a pair, when the measures will alternate between triple $|-\cup|$ and dupletic $\left|1 \frac{1}{2} \frac{3}{4} \frac{3}{4}\right|$. Possibility and probability alike are based on common practice in music and existing languages rather than on the obscure dicta of isolated ancient grammarians when these happen to point otherwise.
XVI. The law of rapidity in influencing quantity and accent.

Increased rapidity beyond a certain medium tends, on the principle of economy or ease, to levelling down of quantity and accent; diminished rapidity, on the same principle, to a wider discrimination of those elements.

Thus consecutive quantities 2 , 1 , under the influence of a faster tempo, tend to $\mathrm{I}, \mathrm{I}$; under that of a slower, to 3 , I .
XVII. The law of mental and bodily correspondence.

In keeping time with any other part of the body to the movement of the vocal organs, there is, as regards the essentials of rhythm, fundamental correspondence of body and mind, so that such movement is, as it were, an audible dance, reproducing the same intervals and the same accentual scheme as the other organs, no matter by what term-accent, ictus, thesis, ferire, semasia, etc., the accentual blows are signified or connoted.

Thus whatever be the prose accents, they yield in classical metres to a verse-accentuation prescribed by the verse ictus, whenever this is at variance with them. Classical scholars who wish to pronounce Latin hexameters with prose accents in their mouths and ictus in their feet labour under a delusion on a par with the "pitch-accent" delusion to which Law XVII. also gives the coup de grâce.
XVIII. The law of verse-pause in measure-packing.

A pause, indefinite in duration, occurring within a line of verse or at its end, affords, as a breach of rhythm, an opportunity, without offending the rhythmical sense, of packing the respective measure with syllabic material to the extent of a complete measure before the pause,
and a measure after it minus its accented syllable however short.

English blank verse seems to avail itself of this Law to a fuller extent than other verse in any language, but the feature is a common one both in English and in Greek verse of other kinds. There is nothing to hinder a line to end with "wénding" whilst the next begins with "And each flówer."
 falling short of the complete 6 units for two measures by only $\frac{3}{4}$ and yet satisfying the rhythmical ear that there is only one measure.
XIX. The law of accent, quantity and syllabicity in the structure of verse.
Though verse-types in language vary in the extent to which conscious attention is bestowed on accent, quantity and syllabicity between the extremes of perfect strictness and a wide freedom, all verse is accentual, quantitative and syllabic in the sense that any given line is all these by the nature of the case and in the ear and intention, conscious or unconscious, of the poet.
XX. The law of accent-gradation in verse of the stricter forms.
The accents in an unbroken line of verse of the stricter forms may, according to taste, or tradition, preserve the level strength of a chant-like rendering, or adopt an artificial more or less musical scheme independent of sense, or finally follow the sense so far as verse structure permits by a gentle progressive rise in force, affecting the line as a whole or in sections, and, as in prose, broken only for reasons based on verbal accent-gradation, old matter, and contrast.

It is a moot point in some languages how far it is permissible to allow these reasons to be operative. They certainly had no place in Greek.
XXI. The law of latent accent in verse.

Latent accent, felt only mentally and induced by context, occasionally falls in the interior of a syllable struck earlier in the measure, or even in a previous measure, and continuing through and beyond the accent.

Thus there is implied in latent accent that it remains unexpressed by a syllabic blow. It is of two kinds according as the syllable within which it falls begins with a stronger or with a weaker blow than it itself would normally bear. In the latter case we have the peculiar effect called syncopation.
XXII. The law of variation from uniform tempo.

Under the influence of emotion, or simply from lightness or burden of phonetic material, chiefly consonantal, there may be appreciable acceleration or retardation of accents, units, quantities and measures without detriment to the "Time,"-subjective tests alone being relevant criteria of what is or is not strict time.

Mere lightness or burden of phonetic material are not always conclusive, for by a little violence light syllables can be spread out, and by a special effort heavy ones can be compressed, to normal limits. Indefinite pause ( $\propto$ ) or suspension of measurement either on a syllable or after it may mark a break in the rhythm either at the end of a line or within it. The influence of accent in causing slight involuntary lengthening is a negligible factor.
XXIII. The law of metre or measure-numeration.

A line of verse usually consists of from one to eight measures, those of four measures having the fourth occasionally silent, those apparently of three being occasionally, and those of seven probably invariably supplemented by a measure of silence, whilst those apparently of six may really be 8 -measure with the
fourth and eighth silent. Thus we have monometer (a freak), dimeter, trimeter, pseudo-trimeter, tetrameter, pentameter, (pseudo-pentameter), hexameter, pseudohexameter, pseudo-heptameter and octameter.

Three consecutive rising accents with a fourth weak are the first step in the transition from tetrameter to trimeter, the remaining stages having a silent beat, at first of full quantity, then gradually cut down in duration to vanishing point. The first two stages are the "Advance and retire" of the dance, and also, with one sound for each accent and a hastened tempo, what is known as "Kentish Fire." An octameter is two tetrameters, each of which may be similarly treated. Thus the tetrameter, itself the offspring of a primordial dimeter, based obviously on man's physical structure, becomes the parent of the trimeter, the octameter, the heptameter, the hexameter, probably even of the pentameter by the weakening of one member of the hexameter. Most of these processes can be observed repeating themselves at the present day. With $m$ to indicate a measure a résumé of them might take this form :
$m m m \dot{m}$, as in English tetrameters.
$>m m \dot{m} m$, as in English tetrameters end-weakened.
$>m m \dot{m}(m)$, as in the latter half of English ballad-metre.
$>m m \dot{m} \bigcirc$, as in many English trimeters.
$>m m \dot{m}$, as in the two halves of classical epic hexameter and such English hexameters as Shelley's "Hail to thee, blithe spirit, Bird thou never wert."
XXIV. The law of various opening and close of a line of verse.
In verse it is common for a line to begin weak and end strong, the reverse being less common, but a line of verse may be doubly strong by opening with an accent and closing with an accented syllable, or, on the other hand, the first accentual-blow may be led up to by the weaker vowel-blow of a preliminary syllable
(led up to, perhaps, in similar fashion), and the final accented syllable may be tapered off by adding one or two weaker than itself.

Hence arise varieties intended to be covered by such footnames as trochee, iambus, dactyl, anapaest. It is assumed on extremely doubtful, because unscientific, grounds that a line of verse must be based throughout on the trochee-dactyl or the iambus-anapaest type, a conception which by its mechanical nature respects neither rhythm nor natural phrasing, and breaks down completely in presence of facts such as the endings, "I love thee "=iambus + syllable, "of society" = anapaest + two syllables. For syllables playing the part of upleaders and off-tailers it is difficult to invent suitable names to express their real rhythmical functions.

Every language-and, with immense limitations, the same is true of every individual-has it own favourite selection from those of the foregoing laws that are not in their statement universal; convention, racial or provincial preferences and speech-habits, historical and foreign influences, aesthetical considerations-these and such as these being what determine the choice and range of variation, whether free, as in prose, or formally restricted as in verse.



## SPECIM

## SIGNATURES.

| Large-Unit (Musical). | Traditional-Unit (Prosodic) |  |
| :---: | :---: | :---: |
| $\frac{2}{8}$ and (none) | $\frac{2}{1} \text { and } \frac{3}{\frac{2}{3}}$ | 1 1 <br> 2 $\|$ |
| $\frac{3}{8} \text { and (none) }$ | $\frac{3}{1} \quad \text { and } \quad \frac{2}{1 \frac{1}{2}}$ | $\begin{array}{lll}1 & 1 & 1 \\ & 3 & \\ & & \end{array}\|,\| \begin{array}{ll}2 & 1 \\ 1 & 2\end{array}$ |
| (None) | $\frac{3}{1 \frac{1}{2}}$ | $1 \frac{1}{2}$ $1 \frac{1}{2}$ $1 \frac{1}{2}$    <br>  $4 \frac{1}{2}$    3 <br>  3 3    <br>       |
| $\frac{3}{8}$ | $\frac{3}{1}$ | $1 \frac{1}{3}$ $\frac{2}{3}$ 1 $\mid$, 1 $1 \frac{1}{3}$ |
| (None) | $\frac{3}{1 \frac{1}{2}}$ |  |
| $\frac{4}{8}$ or $\frac{2}{4}$ and (none) | $\frac{2+2}{1}$ and $\frac{3+3}{\frac{2}{3}}$ |  |
| $\frac{6}{8} \text { and (none) }$ | $\frac{3+3}{1}$ and $\frac{2+2}{1 \frac{1}{2}}$ | $\left\|\begin{array}{ccccccc}1 & 1 & 1 & \vdots & 1 & 1 & 1 \\ 2 & 1 & \vdots & 2 & 1 \\ & 3 & \vdots & & 3 & \\ & & & & \end{array}\right\|, \left\lvert\, \begin{gathered}2 \\ 1\end{gathered}\right.$ |
| $\frac{3}{4}$ and (none) | $\frac{2+2+2}{1}$ and $\frac{3+3+3}{\frac{2}{3}}$ | $\left\|\begin{array}{ccccccc}11 & 1 & \vdots & 1 & 1 & \vdots & 1 \\ 2 & \vdots & 2 & \vdots & 2 \\ 2 & \vdots & 2 & \vdots & 1 & 1 \\ 1 & 1 & \vdots & 2 & \vdots & 2\end{array}\right\|, \left\lvert\, \begin{aligned} & 1 \\ & 1\end{aligned}\right.$ |
| $\begin{aligned} & \mathbf{5} \\ & \overline{8} \end{aligned}$ | $\frac{3+2}{1}$ and $\frac{2+3}{1}$ | $\begin{array}{rccccc}1 & 1 & 1 & \vdots & 1 & 1 \\ 3 & & \vdots & 2 \\ & 3 & \vdots & 1 & 1\end{array}\|,\| \begin{array}{cc}2 & 1 \\ 2 & 1 \\ 1 & 1\end{array}$ |
| (None) | $\frac{3}{1 \frac{1}{2}}$ and $\frac{3}{1}$ |  |
| $\frac{3}{4} \text { and } \frac{6}{8}$ | $\frac{2+2+2}{1} \text { and } \frac{3+3}{1}$ | 2 $\vdots$ 2 $\vdots$ 1 1 2 |

## THE

## BASIS OF ENGLISH RHYTHM

Review in The Nation (New York) of 27th July, 1905. Opening sentences:

"It is hard to maintain a properly judicious spirit in reviewing this pamphlet of scarcely sixty-three pages. By it any adept is likely to be rapt into a trance of amazed enthusiasm, searching in vain among his memories of the hundreds of jottings, notes, remarks, essays, articles, booklets, books and tomes which have appeared since George Gascoigne penned his all too brief and all too hurried 'Notes of Instruction' in 1575, for even one with anything like so muck pith, sap; and kernel in so little space. In several respects it is the most important utterance yet made on the subject. Who disbelieves should read it and be convinced. He may disagree with some statements and inferences, but he will find himself understanding every sentence at first reading, and reading many sentences over-and over for mere relish of their novelty or cogency, or sound plain common sense. Everywhere he will be stimulated to thought, and much of it will be new thougbt, much instant clarification of old puzzles.",

## Henty Sweet :

"Mr. Thomson seems to me better equipped for his task than many of his predecessors."

## T. S. OMOND :

"This is a most striking pamphlet. What strikes me most is its great originality and the subtlety of its analysis. His grasp of the principles of rhythm seems to me masterly. The more $I$ examine bis notation the more $I$ admire its flexibility and accuracy. An independent and brilliant study."
arW37676



